"WE GO WHEN DUTY CALLS"
FIRE & EMS DEPARTMENT
Town of Upton, Massachusetts
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January 19, 2024

Michael Antonellis, Planner & Director
Land Use & Inspectional Services (LUIS)
One Main Street, 2nd Fl
Upton, Massachusetts 01568

Re: Fire & EMS Comments on the Comprehensive Permit Application for 47 Main Street

Dear Michael,

This letter provides comments from the Fire & EMS Department on the impact of the proposed four (4) story Garden Style Apartment Building and associated garages proposed to be built in the rear area of the 47 Main Street property parcel near the intersection of School Street and Main Street. The length of the single driveway to access the apartment building is over three hundred (300) feet in length from the proposed single entrance and exit roadway access to Main between addresses 45 and 51, with 45 Main Street being the single Funeral Home in the community which often has significant vehicle parking on both sides of Main Street during regular calling hours and Funeral services.

The proposed single entrance driveway is a somewhat circuitous drive with multiple curves from the Main Street Entrance to the Apartment Building driveway and parking area that encompasses the building. This Main Street access driveway to the parking lot and drive that encompasses the entire perimeter of the apartment building appear to be configured in this manner in response grade, wetlands and other siting and or property parcel constraints.

The buildings for the proposed apartment complex are sited in a terraced condition to the rear of the property parcel near where it borders Whitney Lane and Hazeltine Road. The west side of the apartment building is four (4) stories, and the east side is five (5) stories. The north and south sides of the building consist of a story of grade change and are proposed with substantial retaining walls to treat this significant terraced condition. There are three (3) garage structures, two which are near one another.

The comprehensive permit application and preliminary architectural plans indicate of the ground level on the east side consists of six (6) apartment dwelling units, a fitness room and main entrance at grade on this side of the building. The preliminary concept design appears to configure the proposed grade plane such that the ground level is a classified as a basement rather than a story at grade as defined by 780 CMR 5.0.

The flat roof reduces the overall height of the building measured in feet as defined by 780 CMR 5.0, the Massachusetts State Building Code. The comprehensive permit application also refers to a building systems concept of an all-electric building in response to the state's deep decarbonization plan and new energy code. This all-electric approach is in response to state policies discouraging the use of fossil fuels. The comprehensive permit application does not provide specific building systems technologies proposed to satisfy this intended objective.

The terrace siting of the apartment building provides a configuration that allows essentially "at grade" dwelling units slightly above the grade plane on the ground floor. This significant terraced condition creates a five (5) story building condition for fire, EMS and emergency operations. Additionally, the retaining walls and landscape concept proposed east and west sides of the building perimeter in this terraced condition introduces challenges with building access for firefighting specifically the deployment of ground ladders for access to the lower three floors. This steep grade condition adversely impacts life safety and firefighting operations on these two sides of the building. The slope of the driveway on the north and south sides of the building also will constrain and limit fire & aerial apparatus set-up and deployment on these sides of the apartment building.

The project proposes an 8" private water main to be extended into the property and is planned to loop the site. Three (3) fire hydrants are proposed, one in the access driveway near the first parking lot closest to Main Street and two (2) additional hydrants are proposed, one on the northwest and southeast corners of the access drive that encompasses the building. Fire & EMS and code enforcement had a preliminary meeting with the development Team and confirmed this general water supply arrangement is acceptable and will provide a sufficient fire flow that will need to be confirmed in a detailed design of the building. The hydrants shall be coordinated with snow removal or management plans.

The building code, 780 CMR 9.0, will require this large apartment building to be provided with complete automatic sprinkler protection in accordance with NFPA 13 and a manual wet-standpipe system in accordance with NFPA 14. The developer team in the detailed design shall plan to have the fire department use hose valves be located on the main landing of the required egress stairs as permitted by NFPA 14. The building fire department connection shall also be a 4" Storz type fire department connection with a 45-degree elbow. Locating additional fire department hose cabinets, if required and as necessary, will require Fire & EMS Department approval in the building permit application process.

In addition to the items summarized above Fire & EMS review comments on the proposed apartment building and garages for 47 Main Street:

1. The length of the driveway to access the apartment building and garages presents a concern to ensure access is maintained to the complex. Given the size, scale and number of dwelling units in the building, this single access point to this property needs to comply with a lane marked subdivision roadway with sufficient width to ensure two-way access for fire apparatus and emergency vehicles. Configuring the access drive to meet a sub-division roadway requirement with proper lane widths and lane markings ensures there is appropriate fire & EMS apparatus access for multiple aerial apparatus both Town owned, and mutual aid companies will maintain sufficient access and egress to this large five (5) story multi-family building. We also recommend the driveway/roadway access to Main Street be provided with a design feature to ensure there is no parking near this curb cut driveway/roadway entrance. This design feature will ensure a parked car is unlikely to encroach on the turn radius of the entrance for fire apparatus.

2. The west side of the building is four (4) stories, and the east side is five (5) stories. The comprehensive permit application and preliminary architectural plans indicate of the ground level on the east side consists of six (6) apartment dwelling units, a fitness room and main entrance at grade on this side of the building. The preliminary concept design appears to configure the proposed grade plane such that the ground level is a basement rather than a story at grade as defined by 780 CMR. These five (5) stories at grade condition on the south side of the building coupled with a flat roof which can easily accommodate building equipment and systems, such as renewable energy system components and equipment. Given this initial build and possible future build conditions concerns with a flat roof an egress or access stair to the roof should be incorporated to provide timely access and response for firefighting on this flat roof.

3. The terraced apartment building siting provides a configuration that allows "at grade" dwelling units on the ground floor. This configuration creates a building that is five (5) stories for fire, EMS and emergency operations. Additionally, the retaining walls and landscape concept for proposed around the entire perimeter for this terraced condition appears to introduce challenges with building access including the deployment of ground ladders for access to the lower three floors that may adversely impact life safety and firefighting operations. Given this access constraint the four corners of the building need to be accessible for aerial apparatus set-up and deployment via marked fire lanes.

4. The proposed parking in these areas in the north and south driveways should be planned and coordinated to maintain emergency vehicle aerial apparatus access. The access driveway around the building should be coordinated to ensure two-way traffic is provided around the building for access in emergencies. Both the northern and southern entrances shall be provided with marked fire lanes for firefighters and EMS access in emergencies and both entrances shall be provided with fire alarm annunciators. The lower entrance will be the primary access point and shall be provided with a large Supra brand rapid entry key box.

5. The comprehensive application proposes an all-electric heating and cooling system for the complex to satisfy the new energy code and the Commonwealth's climate policy decarbonization plan. Power outages in Upton and this area of the community have at times been frequent and even prolonged specifically in freezing conditions and winter weather. Given this historical experience the applicant needs to evaluate the reliability of utility power and consider resiliency options to provide back-up power options to ensure reliable heating (or cooling) is available in extreme climate conditions, specifically cold weather to guard against freezing conditions for this large multi-family apartment building when there is a prolonged utility power outage.

6. This building will be required to have an Upton Fire & EMS Department radio master box in addition to a commercial communicator or dialer for fire protection systems supervision and municipal alarm reporting. The radio box does require a roof or attic mounted antenna system.

7. Fire & EMS recommends the developer team evaluate the fire separation distance requirements of the garages to one another and the building to ensure proper distance or construction type and exterior wall ratings are addressed. Additionally, if renewable energy systems or building energy storage systems (BESS) are incorporated in the garages or within or near the building to support building or site renewable energy systems or electric vehicle charging, Fire & EMS would like to review and discuss

these hazards and variables prior to a building permit submission to ensure the risks to firefighters and firefighting operations is addressed, managed and mitigated.

Fire & EMS looks forward to further review and coordination of this comprehensive permit application with LUIS and the Zoning Board of Appeals to ensure the health safety and welfare of the building occupants, residents and to work with the applicant to ensure firefighting safety issues or hazards are addressed and mitigated. Fire & EMS will attend the next posted zoning board of appeals with the applicant and design team to answer any questions with our understanding of the concept design project assumptions, requirements and recommendations.

Regards,

Daniel Lazarz

Digitally signed by Daniel Lazarz
DN: C=US, E=dlazarz@uptonma.gov, O=Upton Fire & EMS Department, OU=Captain, CN=Daniel Lazarz
Reason: I am the author of this document
Date: 2024.02.05 07:41:45-05'00'

Daniel Lazarz
Captain

Cc:
Zoning Board of Appeals Members
M. Marchand, Fire & EMS Chief
M. Bradley, Public Safety Director
P. Roche, Building Commissioner